

perceptible. Again, *C. xanthophrys* cannot be the young of *Oxylabes madagascariensis*, because of the different scutellation of the tarsi, while, moreover, we have the young of the latter bird in the British Museum, and it differs only slightly from the old.]

6. *Oxylabes madagascariensis* (Gm.).

7. *OXYLABES CINEREICEPS*, sp. nov.

Olive-green, with narrow pale shaft-lines; wings and tail olive, the edges to the primaries olive-yellow; head and nape slaty grey, lores dull white; cheeks and sides of face creamy white; ear-coverts slaty grey; throat and fore neck white; rest of under surface of body yellow, olive on the sides; under tail-coverts olive-yellow; thighs olive-brown; under wing-coverts olive-brown washed with fawn-colour; edge of wing yellow; quills light brown below, fulvescent along the edge of the inner web. Total length 5·6 inches, culmen 0·55, wing 2·75, tail 2·3, tarsus 0·85.

Hab. Fianarantsoa, Madagascar (*Rev. D. Cowan*).

Notwithstanding the difference in the colouring of the two species, *O. cinereiceps* seems to be strictly congeneric with *O. madagascariensis*.

5. On the Mammals of Gilgit. By JOHN SCULLY.

[Received January 6, 1881.]

The tract of country to be referred to in this paper may be roughly defined as the basin of the Indus river within the limits 35° to 36° 30' N. lat. and 74° to 75° E. long.; it forms the north-western portion of the territories of the Maharaja of Kashmir. My observations refer principally to the Mammalian fauna of Gilgit, a district which lies nearly due north of Srinagar, the capital of Kashmir, at a distance of about 230 miles by road; but I also include the Astor valley, and Nagar, Hunza, and Yassin, three small States which adjoin Gilgit, and are tributary to Kashmir. My limits are—on the south the Dorikun or Burzil Pass at the head of the Astor valley, on the east the great bend of the Indus near Haramosh, on the north the principality of Hunza, and on the west Yasin.

All this country is highly mountainous, and is intersected by numerous narrow valleys, the streams of which are tributary to the Indus. The lowest valleys are about 4500 feet above sea-level, while the mountain ridges are of great height, with peaks from 15,000 to over 26,000 feet high. The lower parts of the valleys are very barren and arid, their sides being formed by steep bare walls of gneiss; the cultivated portions are scattered and of small extent, on terraces of the river-alluvium high above the main streams, or more generally on alluvial fans at the mouths of lateral ravines. Above 8000 feet the scenery changes greatly, and grass-covered downs and luxuriant pine-forests abound; higher up still we find the region of snow-covered peaks and mighty glaciers.

Gilgit itself is a village on the banks of the Gilgit river, about 25 miles above the point where that stream falls into the Indus near Bunji. At the point where Gilgit is situated, the valley is about a couple of miles broad; and cultivation is there carried on on a flat bit of river-alluvium about 40 feet above the stream; the elevation of Gilgit is 4890 feet above the sea. The climate of Gilgit is characterized by an extreme annual range of temperature, and by great dryness. In summer the temperature in the shade is sometimes as high as 109° F., and the heat is rendered very oppressive by the glare and radiation from the bare rocky hill-sides which bound the valley; then in midwinter the cold is severe, the minimum temperature in the shade being often as low as 20° F., while the minimum temperature of radiation occasionally falls to 4° F. From April to September there are occasional light showers; but the total annual rainfall is little over 3 inches. Snow rarely falls in winter about Gilgit itself, and then very quickly melts; but of course the snowfall is very heavy on all the hills about the valley at an elevation of over 7000 feet.

The following notes on the Mammals of Gilgit are based on a collection of about 200 specimens, which I made during a residence of nineteen months in that country. Examples of all the species here enumerated were secured; and of most of them I obtained large series. Of the thirty-three species in my list, thirty-one occur in the immediate neighbourhood of Gilgit; the remaining two species, viz. *Ovis poli* and *Arctomys caudatus*, inhabit respectively the extreme northern and southern limits of the tract included in this paper, *Ovis poli* being found in Hunza and *Arctomys caudatus* at the head of the Astor valley, north of the Dorikun Pass.

All that has hitherto been published on the Mammals of Gilgit is contained in two notes by Mr. W. T. Blanford, in the Journal of the Asiatic Society of Bengal¹, on some specimens collected by Major Biddulph, and presented by that officer to the Indian Museum in Calcutta. Mr. Blanford in these papers identifies eleven species, which I would reduce to eight or nine.

I am indebted to Major Biddulph, who has long resided in Gilgit, for some interesting specimens of mammals collected by him there, and for some notes about the Ruminants of the region. I have also to express my obligations to Mr. Oldfield Thomas, Dr. G. E. Dobson, and Mr. W. T. Blanford for assistance in the preparation of this paper.

CHIROPTERA.

1. RHINOLOPHUS HIPPOSIDEROS (Bechstein).

Rhinolophus hipposideros, Dobson, Cat. Chir. B. M. 1878, p. 117.

This small nose-leaved Bat is fairly common in the warm valleys of the Gilgit district during the summer months. Its vertical range seems to be from about 4000 to 6000 feet above sea-level, and it is

¹ Part II. 1877, pp. 323-327, and 1879, pp. 95-98.

not met with above the latter elevation. It appears about the first week in April, and is not seen after the beginning of October. This Bat has a very powerful and long-sustained flight, and it frequently enters rooms at night. It generally flies higher up in the air than *R. ferrum-equinum*, and is perhaps more frequently found away from dense tree-growth than that species. *R. hipposideros* has not, I believe, been previously recorded from British India.

2. RHINOLOPHUS FERRUM-EQUINUM (Schreb.).

Rhinolophus ferrum-equinum, Dobson, Cat. Chir. B. M. p. 119.

This species was very common in the low hot valleys of the Gilgit district from about the middle of April to the end of September, appearing a little later in spring and disappearing a little earlier in autumn than *R. hipposideros*. Its flight appeared to be less powerful than that of its smaller relative; and when it entered a room at night it was more easily captured. Its vertical range in the district seems to be from about 4500 to 5500 feet. Its favourite haunts are orchards and clumps of mulberry trees, where insect food is abundant; and in the close hot evenings in summer it could always be found in the lowest parts of the valleys in such situations, flying low down about the trees.

3. SYNOTUS DARJILINGENSIS (Hodgson).

Synotus darjilingensis, Dobson, Cat. Chir. B. M. p. 177.

This Bat was common in summer in the Gilgit district at an elevation of 5000 feet. It made its appearance as early as the first week in March, and was not seen after the first week in October. It frequently enters rooms in the evening from 8 to 10 o'clock.

All the specimens collected differ from *S. barbastellus* of Europe in not having any projecting lobe on the outer margin of the ear; and in all of them the ear laid forward reaches beyond the end of the muzzle.

4. PLECOTUS AURITUS (Linn.).

Plecotus auritus, Dobson, Cat. Chir. B. M. p. 178.

This large-eared Bat is not of frequent occurrence in Gilgit. I obtained two specimens in September at an elevation of 5000 feet.

5. OTONYCTERIS HEMPRICHI (Peters).

Otonycteris hemprichi, Dobson, Cat. Chir. B. M. p. 182.

This fine species does not seem to be very common in the Gilgit valley. A specimen was first obtained there by Major Biddulph in July 1876; and the only specimen I secured was captured in Gilgit in May. It was observed flying over a field about dusk; and its large size at once attracted attention.

6. VESPERUGO DISCOLOR (Natt.).

Vesperugo discolor, Dobson, Cat. Chir. B. M. p. 204.

This Bat was only observed in summer, in well-wooded country,

at elevations of from 10,000 to 11,000 feet. It only began its flight about dusk, and flew high up and swiftly; so that it was rather difficult to secure specimens. Two specimens were shot in the Nultar valley in August.

7. *VESPERUGO BOREALIS* (Nilsson).

Vesperugo borealis, Dobson, Cat. Chir. B. M. p. 203.

Only one specimen of this Bat was obtained in the Gilgit district; I unfortunately omitted to record the date of its capture and the elevation at which it was found.

8. *VESPERUGO PIPISTRELLUS* (Schreb.).

Vesperugo pipistrellus, Dobson, Cat. Chir. B. M. p. 223.

This was by far the commonest species of Bat found about Gilgit. Even in the depth of winter a few were occasionally seen.

9. *HARPIOCEPHALUS TUBINARIS*, sp. nov.

Head and muzzle as in *Harpiocephalus suillus*. Ears moderate, rounded off at the tips; the upper third of the outer margin slightly emarginate, the middle third commencing by a moderate convexity, then slightly convex opposite the middle of the tragus, and terminating in a convex lobe in front of the base of the tragus; from near the base of the inner margin of the ear-conch, opposite the posterior angle of the eye, a small but distinct spur-like process projects abruptly forwards. Tragus moderately long, tapering above,

Fig. 1.



Head of *Harpiocephalus tubinaris*, nat. size.

where it curves outwards; a small pointed lobule above the base of the outer margin, succeeded by a well-marked emargination, immediately above which the tragus attains its greatest width; inner margin convex in its upper two thirds, nearly straight at the base; outer margin nearly straight below, the upper half concave.

Thumb long, with a strong claw. Wings from the side of the proximal phalanx of the outer toe; extreme tip of tail projecting.

Distribution of the fur as in *H. suillus*: above blackish brown at the base, the distal halves of the hairs pale greyish brown; below dusky on basal halves, the tips being white; the superficial colour of the fur is therefore greyish brown on the upper parts of the animal, and white below.

The outer incisor is distinctly shorter than the inner, and does not touch the canine. The first upper premolar is smaller than the second; but there is not quite such a disproportion in size between these teeth as obtains in *H. suillus*. In other respects the dentition is the same as in the last-mentioned species.

Length, head and body 1''·8, tail 1''·4, head 0''·73, ear 0''·55, tragus 0''·32, forearm 1''·4, third finger 2''·55, fifth finger 2''·07, thumb 0''·45, tibia 0''·67, calcaneum 0''·57, foot and claws 0''·37.

The animal described above is, I think, distinct from all the species of *Harpiocephalus* described in Dr. Dobson's Catalogue of Chiroptera; and I propose for it the name of *H. tubinaris*. It is perhaps more nearly allied to *H. suillus* than to any other known species, but differs in having the upper third of the ear-conch less emarginate, in possessing a spur on the inner margin of the ear, and in the fur being very differently coloured. In the last two characters it resembles *H. leucogaster*.

This Bat does not seem to be common in the district. I only secured one specimen, which had entered my room in Gilgit at night on the 20th August.

CARNIVORA.

10. FELIS UNCIA, Schreb.

Felis uncia, Schreber, Säugeth. i. p. 386 (1778, ex Buff.).

The Ounce is fairly common in the Gilgit district, in Hunza and Nagar, and in Yassin. It is usually found high up in the hills, about the grounds frequented by the Himalayan Ibex and Markhor; and it preys on these animals. It does not seem to be very shy; and I have known it to attack and kill ponies at pasture not very far from human habitations. In winter it occasionally descends as low as an elevation of 6000 feet for a raid on sheep and goats, which it slaughters wantonly. I procured several fine specimens of the Ounce about Gilgit.

11. FELIS LYNX, Linn.

Felis lynx, Linnæus, Syst. Nat. i. p. 62.

The Lynx is found in the same localities as the Ounce, but always at a lower elevation and in rather greater numbers. It does not frequent such open ground as the Ounce, and of course only preys on the smaller wild mammals. It frequently haunts the outskirts of villages at an elevation of about 5000 feet, and is a dreadful foe to goats and sheep. A pair of these animals killed six sheep in one night near Gilgit. My specimens agree with the European form of Lynx, and not with the paler *F. isabellina* of Blyth.

12. CANIS LUPUS, Linn.

Canis lupus, Linnæus, Syst. Nat. i. p. 58.

Wolves are found in the valley of the Gilgit river from Gakuch to the Indus, and in all the smaller lateral valleys between those two points. They usually go about in pairs or in small packs,

hiding during the day in rocky ground or in the dry beds of small mountain-streams. In winter the Wolves frequently prowl about houses during the night, to the great annoyance of the dogs; and they often kill goats and sheep. The young are born early in May.

My specimens of this animal from Gilgit have the upper carnassial tooth slightly longer than the two upper molars, and are therefore probably distinct from *C. pallipes* and *C. laniger*, in which the fourth upper premolar is shorter than the two upper molars together (Blanford, P. A. S. B. 1877, p. 116). In size and coloration, moreover, the Gilgit Wolf agrees with the European species.

13. *CYON PRIMÆVUS*, Hodgs.

Cyon primævus, Hodgson, Proc. Zool. Soc. 1833, p. 111; Asiatic Researches, xviii. p. 221.

This species appears to be widely distributed in the Astor and Gilgit districts, and is said to be found in Yassin and Chitral; its habits are very well known. A specimen from Gilgit agrees in all particulars with examples from Nepal and other parts of the Himalayas. In all the skulls of this species which I have examined the upper sectorial tooth is longer than the two upper molars taken together; the reverse is the case in *C. alpinus* of Pallas, from the Altai.

14. *VULPES MONTANA*, Pearson.

Vulpes montana, Pearson, J. A. S. B. 1836, p. 313; Blanford, J. A. S. B. 1877, ii. p. 324, and 1879, p. 95.

Foxes are very common in the Astor and Gilgit districts, in Hunza, Nagar, Yassin, and Chitral. About Gilgit the Hill-Fox is found on stony ground, in the vicinity of cultivation, at elevations of from 5000 feet to 10,000 feet. The young are born in May.

In a large series of these Foxes which I have, there is great variation in colour, some being pale yellowish fulvous above and white below (*V. flavescens*, Gray), while others are very dark and rufous above, with the underparts black; but all intermediate forms occur. There are also some minor differences in the skulls and in the size of the teeth; but I cannot find that these are correlated with the differences in colour of the pelage. According to Mr. Blanford's views there are in the Gilgit district, besides *V. montana*, three other species or races, viz. *V. melanotus* (?), *V. griffithi*, and *V. flavescens*; but I doubt if these forms are more than varieties. A fox shot by Major Biddulph in Chitral is not distinguishable from some examples of *V. montana* from Simla.

15. *MARTES FOINA* (Erxl.).

Mustela foina, Erxleben, Syst. Reg. An. p. 458 (1777).

The Beech-Marten is common in the Gilgit district, and in Hunza, Nagar, and Yassin, where great numbers are killed by the natives for the sake of the fur. This Marten usually keeps high up

in the hills, and is only rarely found in the vicinity of villages as low as 5000 feet. In coloration and in dental and cranial characters my specimens from the Gilgit valley accord completely with *M. foina* as defined by Mr. Alston (P. Z. S. 1879, p. 469).

16. MUSTELA TEMON, Hodgs.

Mustela temon, Hodgson, J. A. S. B. 1857, p. 207.

This yellow-bellied Weasel is fairly common in the Gilgit district at elevations of from 6000 to 12,000 feet. Two specimens in my collection from Gilgit agree well with Hodgson's original description. The figure of *M. temon* in Mr. Hodgson's drawings, now in the British Museum, shows that the type was rather darker on the upper surface than my examples; and this is also the case in a skin from Sikkim or Tibet in Mr. Blanford's collection; but the Gilgit and Sikkim animals are certainly specifically identical.

I was disposed to identify this Weasel with *M. alpina*, Gebler, from the Altai (Moscou Mémoires, vi. 1823, p. 213); but Radde's figure and measurements of the skull of *M. alpina*¹ from the typical locality seem to indicate a different species. A still older name, which may have to be used for this species, is *Mustela altaica*, Pallas (Zoogr. Rosso-Asiat. i. p. 98, 1811).

17. LUTRA VULGARIS, Erxl.

Lutra vulgaris, Erxleben, Syst. Reg. Anim. p. 448 (1777); Blanford, J. A. S. B. 1877, ii. p. 324.

Otters are tolerably common in the Gilgit river and its tributaries. Of the specimens of Otter which I obtained in the Gilgit district two agree in all respects with the Common Otter of Europe. The skull of one of these animals, a male, differs from the figure of the type of *L. nair*, Cuv. (Anderson, Anatomical and Zoological Researches in Western Yunnan, &c. pl. xi.), precisely in the points mentioned by Dr. Anderson for the differentiation of *L. nair* and *L. vulgaris*.

18. URSUS ISABELLINUS, Horsfield.

Ursus isabellinus, Horsfield, Linn. Trans. xv. 1827, p. 332.

Ursus leuconyx, Severtzoff, Turk. Jev. p. 80 (1873); Ann. & Mag. Nat. Hist. 1876, xviii. p. 43.

Bears are common in the Astor valley and the Gilgit district, where they are usually found above the forest-region. In October numbers of these animals descend into the valleys as low as 6000 or 5000 feet to feed in the fields, and are then often killed by the peasants. This Bear retires in winter to the shelter of rocks and caves, and remains in a semitorpid state during the season of severe cold. It becomes active again about March. Its usual food consists of fruits and roots; and it appears also to be fond of insects; on the grassy glades between the forests above Gilgit, at elevations of 9000 to 10,000 feet, the loose stones which lie about are constantly found

¹ Reisen Süd. Ost-Sib. i. p. 50.

to have been turned aside by Bears in their search for insects. The natives add that this Bear will devour any carcass it may chance to find in its wanderings.

In the Gilgit district the young are usually born about the middle of May.

The Gilgit Bear agrees well in external characters with Severtzoff's description of his *Ursus leuconyx*. The claws are pale horny or quite white; and the length of half a dozen specimens, measured in the flesh, varied from 4 feet 8 inches to 5 feet 8 inches. There is, as usual, considerable variation in the skulls. I was disposed at first to consider *U. leuconyx* separable from *U. isabellinus* on account of its smaller size, white claws, and more rufous-brown coloration; but I doubt if there be any constant distinction. *U. isabellinus* is usually spoken of as a large Bear, equal in size to *U. arctos*. Jerdon says ('Mammals of India') that a moderate-sized one measured 7 feet 6 inches; and Kinloch ('Large Game of Thibet') says that it attains a length of 7 feet. In the original description of the species, however, *U. isabellinus* is expressly said to be smaller than *U. arctos*, the length of the skin which formed the type being 3 feet 10 inches only. Again, *U. isabellinus* has pale horn-coloured claws very little darker than in *U. leuconyx*. As to the colour of the fur, this varies so much in both forms that no specific difference can be founded upon it.

RODENTIA.

19. SCIUROPTERUS FIMBRIATUS (Gray).

Sciuropterus fimbriatus, Gray, Mag. Nat. Hist. n. s. i. p. 584 (1837).

This Flying Squirrel is not very common in the Gilgit district, where it is confined to forest-country at elevations of from 8000 to 12,000 feet. All my specimens were procured in pine-forests.

20. ARCTOMYS CAUDATUS, Jacq.

Arctomys caudatus, Jacquemont, Voyage dans l'Inde, iv. p. 66 (1844).

This fine Marmot was only found on the southern limit of the region included in this paper. On the Astor side of the Burzil Pass the Long-tailed Marmot is found in considerable numbers; but I have no evidence of its occurrence west of the Indus anywhere in the vicinity of Gilgit.

21. MUS ALEXANDRINUS, Geoff.

Mus alexandrinus, Geoffroy, Descr. de l'Egypte, Hist. Nat. ii. p. 733 (1812).

Mus rufescens, apud Jerdon, Mamm. of India, p. 199; Blanford, J. A. S. B. 1879, ii. p. 97.

Common throughout the inhabited parts of the Gilgit district, from 4000 to 7000 feet above sea-level. It is chiefly a Field-Rat, but often enters houses; and its young are frequently found in sheds

and outhouses. The Gilgit Rat is not separable from the so-called *M. rufescens* of Calcutta or *M. robustus* (Blyth) of Burma; and it also agrees in all essential characters with *M. alexandrinus* (Geoff.). A specimen of *M. alexandrinus* from Algeria, in the British Museum, only differs from one of my Gilgit specimens in having rather harsher fur.

22. *MUS ARIANUS*, Blanford.

Mus arianus, W. T. Blanford, Ann. & Mag. Nat. Hist. 1881, vii. p. 162.

Mus erythronotus, W. T. Blanford, Zoology of Persia, 1876, p. 54, pl. v. f. 3; J. A. S. B. ii. 1879, p. 97, nec Temminck.

This long-tailed Field-Mouse, which is closely allied to *M. sylvaticus* (Linn.), is fairly common in the Gilgit district at elevations of from 5000 to 10,000 feet. It is found on grassy downs in the vicinity of forests, and about hedges in cultivated ground. In the beginning of winter, after a few heavy falls of snow on the hills, this Mouse often enters houses at night, and is then very bold and troublesome.

23. *CRICETUS PHÆUS*, Pallas.

Cricetus phæus, Pallas, Zoogr. Rosso-Asiat. i. p. 163 (1811); Blanford, J. A. S. B. 1879, ii. p. 96.

This Hamster is found in the Gilgit district at elevations of 5000 to about 9000 feet. It is common in summer about pasture-grounds and on the outskirts of pine-forests; and it very commonly enters shepherd's huts, where, indeed, most of my specimens were captured.

24. *CRICETUS FULVUS*, Blanf.

Cricetus fulvus, Blanford, J. A. S. B. 1875, ii. p. 108; *ibid.* 1879, p. 97.

This form occurs in the same localities as the preceding species, and has the same habits; its young are born during the first week in March. Gilgit specimens of this Hamster agree in dimensions with typical examples from Eastern Turkestan; but the colour of the upper parts is greyer and less tinged with yellow.

25. *CRICETUS ISABELLINUS*, De Fil.

Cricetus isabellinus, De Filippi, Viaggio in Persia, 1865, p. 344.

Two specimens of a Hamster captured in the Nultar valley in July, at an elevation of about 9000 feet, agree well with De Filippi's description of *C. isabellinus*. The length of the head and body in my specimens, measured in the flesh, was 5.35 and 5.25, while the type measured 5.9; but De Filippi no doubt took his measurement from a skin, and the skin of the smaller of my two specimens now measures 6 inches. This form seems to me only to differ from *C. fulvus* in size; and I believe that both *C. fulvus* and *C. isabellinus* must be regarded as merely subspecies of *C. phæus*.

26. ARVICOLA BLANFORDI, Scully.

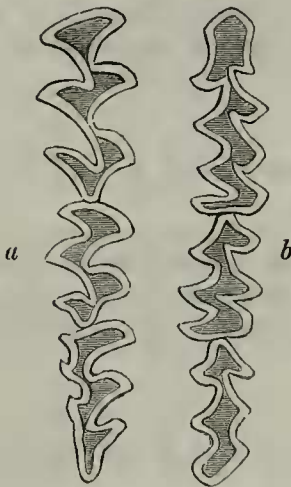
Arvicola blanfordi, Scully, Ann. & Mag. Nat. Hist. 1880, vi. p. 399.

Ears rather large, well haired, showing distinctly above the fur of the head. Tail long, always over one third, and usually about one half the length of the head and body. Heel sparsely haired as far as the posterior tubercle; the rest of the sole quite naked. Fore foot with five tubercles, arranged three and two; hind foot with six tubercles, arranged two, two, one and one.

General colour of the fur above greyish brown with a slight rufous tinge, the hairs deep slate-colour for the greater portion of their length, the ends being pale brown with blackish tips. Under surface greyish white, the hairs deep slaty at their base, with white

Fig. 2.

Fig. 3.



Teeth of *Arvicola blanfordi*, magnified.

Hind foot of *Arvicola blanfordi*, nat. size.

a. Upper molar; b. lower molar.

tips; along a line which separates the colour of the upper and lower surfaces the tips of the hairs are isabelline. The feet are covered with white hairs. Tail sullied white, with a dusky stripe along its upper surface, which is most conspicuous near the tip.

The molar pattern is as follows:—

Upper	I. . . .	5 spaces,	3 external	and	3 internal	angles.
„	II. . .	4	„	3	„	2 „ „
„	III. . .	3	„	3	„	3 „ „
Lower	I. . . .	7	„	4	„	4 „ „
„	II. . .	5	„	3	„	3 „ „
„	III. . .	3	„	3	„	3 „ „

The teeth are very like those of *A. roylei*; but there are some differences, of which the most obvious is that in *A. blanfordi* the anterior internal angle of the first upper molar is in advance of the anterior external angle; whereas the reverse is the case in *A. roylei*. The cemental prisms of the hinder upper molar are also differently separated in the two species.

Arvicola blanfordi differs widely from *A. roylei* in colours and proportions; in general coloration it approaches *A. stracheyi* (Thomas), but is well distinguished from that species by the pattern of its teeth and by its proportions. *A. blanfordi* may be readily known from all species of *Arvicola* hitherto found in British India by its long tail.

The following particulars were noted of a freshly killed male:— Head and body 4·55 inches, tail 2·05, hairs at end of tail 0·2, fore foot 0·4, hind foot 0·75, length of ear 0·7, breadth of ear 0·68. Lips, hands, and feet flesh-colour, the nose a little darker; irides blackish brown.

This Vole is very common in summer in the Nultar valley, near Gilgit, at elevations of from 9000 to 10,000 feet; it is also found, I believe, at similar elevations in the lower part of the Astor valley. I obtained all my specimens of *A. blanfordi* on the outskirts of forests where cattle were grazing, and about shepherds' huts.

27. LAGOMYS MACROTIS, Günther.

Lagomys macrotis, Günther, Ann. & Mag. Nat. Hist. 1875, p. 231.

This species is fairly common in the Gilgit district at elevations of from 10,000 to 13,000 feet, frequenting open stony ground near the snow-line. Wherever found it occurs in numbers; but it appears to be very local in its distribution. A specimen obtained on the hills above Gilgit only differs from the type of *L. macrotis* in being greyer above, and having a well-marked rufous band across the throat.

In the 'Journal of the Asiatic Society of Bengal,' ii. 1877, p. 326, Mr. Blanford describes a specimen of *Lagomys* obtained by Major Biddulph in the Gilgit district, and refers it doubtfully to *L. auritus*.

28. LEPUS TIBETANUS, Waterhouse.

Lepus tibetanus, Waterhouse, P. Z. S. 1841, p. 7.

This Hare is common in suitable localities in the Astor valley, the whole of the Gilgit district, and in parts of Hunza, Nagar, and Yassin. It occurs on open stony ground in the valleys and on the hill-sides, and commonly about tamarisk-growths along the banks of streams; its vertical range in the Gilgit district seems to be from 5000 to about 11,000 feet. The young are born about the end of March, and are often met with near the snow-line at that season. The Gilgit Hare, of which I have collected a large series, agrees well with Mr. Waterhouse's original description of *L. tibetanus*, and,

in all external characters, with the type of that species preserved in the British Museum.

In the 'Journal of the Asiatic Society of Bengal,' 1877, ii. pp. 324-326, Mr. Blanford described, as a new species, a Hare obtained by Major Biddulph in Yassin, under the name of *L. biddulphi*. So far as it is possible to arrive at a conclusion on such a point without actual examination of the type, I believe that *L. biddulphi* is the same as *L. tibetanus*; and I will briefly give my reasons for this opinion.

Mr. Blanford considers that *Lepus biddulphi* closely approaches *L. tibetanus*, but differs in some cranial characters, which he details at length, the skulls of *L. tibetanus* which he uses for his comparison being those of the Hare inhabiting the Nubra valley in Ladak. But the type of *L. tibetanus* was obtained in the neighbourhood of Iskardo, a point midway between Yassin and the Nubra valley; so that if there be a specific difference between the Yassin and Nubra Hares, it is quite as likely that the latter would require a new name as the former: the skull of the type of *L. tibetanus* is not available for examination. Further, there is now in the British Museum a specimen of a Hare collected by Major Biddulph in Yassin, in September 1876, at an elevation of 7000 feet. This must have been obtained in the very same valley as the type of *L. biddulphi*, and in the same month. This example agrees perfectly in external characters with my Gilgit specimens, with the type of *L. tibetanus*, and with the Nubra-valley Hare.

Dr. Günther kindly allowed the skull of the Yassin Hare mentioned above and one of the Nubra specimens to be extracted for examination; and I found that the first agreed well with my Gilgit specimens, and only differed slightly from the Nubra-valley skull in having the posterior ends of the nasals less rounded and the parietals a little flatter. In all these specimens the nasals extend backwards some distance beyond the posterior terminations of the præmaxillæ. I believe that the Hares from the Nubra valley, Iskardo, Gilgit, and Yassin are not specifically separable.

UNGULATA.

29. CAPRA SIBIRICA, Meyer.

Capra sibirica, Meyer, Zool. Annal. i. 397 (1794).

The Himalayan Ibex is common in the Astor valley, the Gilgit district, Nagar, Hunga, and Yassin. It inhabits a higher zone than the Markhor (*Capra falconeri*), well above the forest-region, where occasional grassy slopes are to be found near the crests of the mountains. In a large series of horns of this animal, from the countries mentioned above, a considerable variation in curvature is found; and in some specimens the points of the horns converge, while in others they diverge; but these variations obviously do not indicate any specific difference. The very dark Himalayan Ibex occasionally mentioned by authors are merely old males in winter vesture, and are not confined to any particular locality.

30. *CAPRA FALCONERI*, Hügel.

Capra falconeri, Wagner, Münch. gelehrte Anzeigen, ix. 1839, p. 430.

This species is very common in the Astor valley and the Gilgit district, usually keeping close to the forest-region, but descending in the depth of winter as low as 5000 feet. It changes its quarters a good deal according to season, and as a rule is not to be found in those portions of the hills where the lowest valleys are higher than 8000 feet. It frequents most difficult ground, moves easily over very steep rocky hill-sides, and far excels the Himalayan Ibex in agility. The Gilgit Markhor is typical *C. falconeri*, the horns having a very open spiral curve, but, of course, varying a little. A specimen from Gilgit in Major Biddulph's collection has the horns with quite as open a spiral as is shown in the figure of Hügel's type of *C. falconeri*. The Suliman Markhor (*Capra megaceros* of Hutton) is apparently a separate form.

31. *OVIS POLI*, Blyth.

Ovis poli, Blyth, P. Z. S. 1840, p. 62; Biddulph, Proc. Asiat. Soc. Bengal, 1879, p. 280.

This fine Sheep is found in the northern part of Hunza, on the Shimshal Pamir. Judging from the number of heads sent in to Gilgit, this animal must inhabit Hunza in great numbers. The occurrence of this species south of the Mustagh range and the watershed of the Indus is a matter of great interest; it must now be included in the list of Mammals of British India as commonly understood.

32. *OVIS VIGNII*, Blyth.

Ovis vignei, Blyth, P. Z. S. 1840, p. 70.

This Sheep is found in great numbers in the Gilgit district and the Astor valley. It frequents the bare hill-sides below the forests, and barren stony ground at the foot of the hills as low as 4500 feet. Large herds are frequently seen; but, owing to the open ground they frequent, it is very difficult to stalk them successfully. They wander about much and swim well.

33. *MOSCHUS MOSCHIFERUS*, Linn..

Moschus moschiferus, Linnæus, Syst. Nat. i. p. 91.

The Musk-Deer occurs in fair numbers in the Gilgit district, and is more common in the Astor valley. Specimens from the vicinity of Gilgit exhibit some variations in colour, such as have often been noted with respect to this species in other parts of the Himalayas. The Musk-Deer is, I believe, not found in Nagar, Hunza, or Yassin, but is common in parts of Chitral.